

CORRECTED VERSION

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
19 February 2004 (19.02.2004)

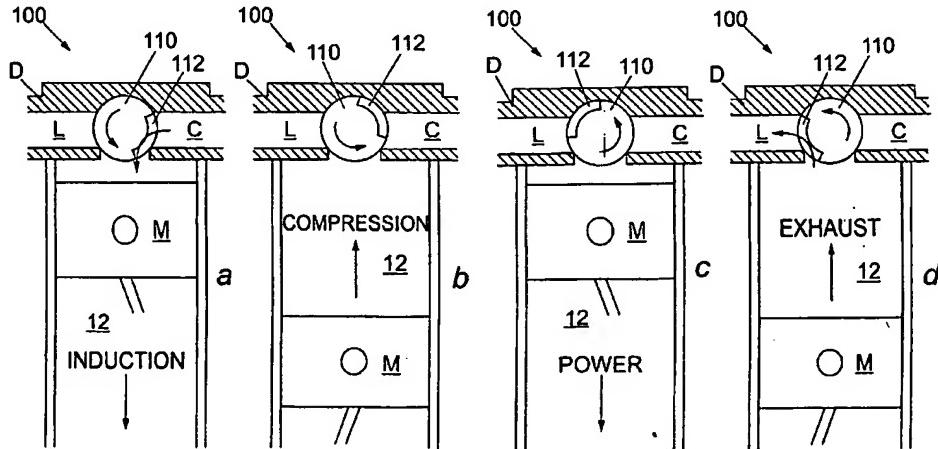
PCT

(10) International Publication Number
WO 2004/015246 A1

- (51) International Patent Classification⁷: **F01L 7/02**,
7/16, 1/34, 1/352, 1/356
- (21) International Application Number:
PCT/GB2003/003517
- (22) International Filing Date: 12 August 2003 (12.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0218674.0 12 August 2002 (12.08.2002) GB
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (48) Date of publication of this corrected version:
22 April 2004
- (15) Information about Correction:
see PCT Gazette No. 17/2004 of 22 April 2004, Section II
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPROVEMENTS IN OR RELATING TO INTERNAL COMBUSTION ENGINES

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(57) Abstract: Cylinder head apparatus (100) for an internal combustion engine having a cylinder (F) and piston (M) comprises a rotating shaft (110) having a recess (112) causing periodic communication between the cylinder (F) and intake (C) and exhaust (L) passages. In other embodiments, two shafts are used, and hollow shafts with apertures are used.